



The Impact of Climate Change on Greek Tourism Industry-The Growing Demand of Sustainability

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ABSTRACT

Climate change is gradually shaping a new environment for Greek tourism. Its physical impact is expected to significantly affect the tourism industry in the medium and long term, aggravating some of its chronic weaknesses, while also highlighting new growth possibilities. Against this background, climate change considerations emerge as a key factor in policy making in the tourism sector. Many aspects of our lives are influenced by the weather and the climate, from the crops we grow to the social activities we engage in. The natural environment and climate conditions are very important in determining the attractiveness of a region as a holiday destination. The environment is one of the most basic resources for tourism and an unchecked growth in tourism inevitably leads to modification of the environment. A new era of sustainability is rising and it's touching every corner of the world. Driven in part by consumers, governments, corporations and the growing visible effects of pollution, sustainability initiatives are becoming more ubiquitous, more aggressive, and more expected. Looking for a better lifestyle, consumers are searching for options that are healthier for them. The good news is that companies can be benevolent and bankable if they understand the intricacies of these forces and react accordingly. Essentially throughout this proposed dissertation the consequences of climate change in Greece and development strategies will be examined. Additionally, the rising demand for sustainability will be referred and finally some conclusions and recommendations for this phenomenon will be attached.

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CHAPTER 1

INTRODUCTION

1.1. Introduction

Greece has a rich environmental reserve. Its natural environment is distinguished for its high biodiversity in combination with a wide variety of biotopes, the quality of the bathing water and the coast of the country, the quality of the atmosphere, are generally better off than in most European countries. Systematic restoration of monuments and renovation of architectural heritage projects, combined with the creation of sidewalk networks in the major cities of the country, have revitalized some historical centers (Arabosis, 2005: 2)

But in other areas and especially in those where economic policy is not incorporating the environmental dimension, less progress has been made. At the same time, the dramatic social and economic changes of recent years have had a noticeable impact on environmental quality. Constantly rising consumer levels coupled with further economic growth of the country are expected to put significant pressure on natural resources and on many cases threatening the balance of ecosystems and the public health (Arabosis, 2005: 2).

Climate change and Tourism are linked in a two-way relationship. Tourism affects and is affected by climate change. The tourism sector is contributing today more on climate change by reducing its ecological efficiency as it develops more reliance on transport, it uses activities of high energy and luxury accommodation. On the other hand climate change brings about more risks from tourism opportunities. It brings regional and seasonal shifts tourist flows and creates new winners and losers. Tourism also leaves its imprint which is not other than carbon dioxide (CO₂) in climate change. Any use or action that is carried out in tourism leaves its own small or large footprint. From making a cup of coffee until visiting a museum, from its air conditioned hotel

and preparing meals as the air journey that will take us to the destination of our holiday the footprint grows larger and larger. Tourism is the driver of climate change for about 5% of the world carbon dioxide emissions.

The impact of Climate Change in the Tourism sector is just as important as tourism is heavily dependent from the natural and cultural heritage of each place. It is therefore excellent sensitive to climate, as this determines the duration and quality of tourism seasons, affects tourism activities and influences environmental conditions that attract and deter visitors.

1.2. Initial review of the literature and key references

There are many other countries that face the problem of environmental impacts on tourism sector. We can compare these cases with ours and find some interesting spots about the management of climate change embracing methods that will help us deal with this phenomenon adopting green methods. Greece should find a way to become a green profitable future destination. Concerning the key references some of them will be culture and heritage definitions, sustainability marketing and methods, green strategies that can be done by the government and hotel owners, Greek islands conditions, challenges that Greece is facing and potential profit sources.

1.3. Research Questions

This report will highlight the consequences of climate change in tourism industry and the danger that Greece's culture and heritage face, will examine some climate impacts on Greek islands what they caused what can be done, also what consumers care about when it comes to sustainability, the biggest growth opportunities for manufacturers and hospitality industries. We will also highlight the environmental challenges impacting people around the world and especially Greece and how governments and corporations are responding to this changing "green" force. Then we'll provide strategies for companies that hope to succeed in the continuously evolving sustainability space.

1.4. Contribution (and Expected Outcomes)

This topic is chosen due to the geographic location of Greece and its high visiting rate that dealing with, as well as due to the possibilities that provides in order to adapt sustainable methods. What is certain is that right now our country is completely unprepared to face this scenario of climate impacts. It needs infrastructure and a series of adjustments at the state apparatus level, as well as extensive training of its personnel.

CHAPTER 2

CLIMATE CHANGES AND TOURISM

2.1. Climate and climate change definition

Climate is the pattern of change in temperature, humidity, temperature atmospheric pressure, wind, precipitation, atmospheric measurement of particles and other meteorological variables in a given area for long periods of time. Therefore, climate change is defined as a significant and lasting one change in the statistical distribution of weather patterns over time ranging from decades to millions of years. Climate change may be limited to a specific area or may appear all over the earth. Fluctuations in periods shorter than some decades like the El Nino phenomenon do not represent climate change (Patterson et. al., 2006).

Climate change is expected to affect the incidence extreme weather, such as heavy rainfall, heat waves, droughts and hurricanes. The Causes of Climate Change mainly come from anthropogenic activities and are reported the production of greenhouse gases emitted by them. After examining polar nuclei on ice, the scientists are convinced that human activity has increased greenhouse gases in the atmosphere, which has been ejected over the last hundred years (De Feitas, 1990).

The fourth report of the Intergovernmental Committee on Climate Change released in 2007 cited a lot of evidence data confirm the post-industrial growth of its gases greenhouse does not come from natural mechanisms. In other words significant increases in the atmosphere of these powerful gases greenhouse is the result of human activity (De Feitas, 1990).

2.2. Climate impact on tourism

The tourist product is obviously vulnerable to climate change, both from and the demand side as well as the supply side. The increasing incidence of ever-higher temperatures during summer, extreme weather and water scarcity are just some of the effects that will have a significant impact

on tourism industry. For example, Deutsche Bank research suggests a reallocation of tourist arrivals in favor of countries with lower average spring temperatures, such as the Baltic and Benelux countries, Germany and Scandinavia, and to the detriment of the eastern Mediterranean countries, to which Greece belongs (Deutsche Bank Research, 2008). Also, a study by the World Tourism Organization predicts that tourism in the Mediterranean will be greatly affected by climate change (World Tourism Organization, 2008).

Tourism is an important economic sector. But climate change may affect tourism activity. Examples of the impact of climate change on tourism is the bleaching of coral reefs in diving areas, reducing natural snow cover in winter destinations; and sea level rise in the islands and seaside areas. Climate change is expected to change the attraction permanently some areas and force them to adapt in the coming decades. It should be assumed that there will be regional and seasonal changes at both national and international levels future tourist flows (Huybers and Bennet, 2003).

In Europe, countries bordering the Mediterranean are expected that they are more affected by climate change. The high temperatures and lack of water could put many tourists of interest in this area at peak season. This is especially true for the countries of the East Mediterranean. In contrast, the countries that could get benefits of climate change are Denmark, Germany and the countries of Baltic (Rutty and Scott, 2010).

The impacts of climate change on tourism concern:

- Seasonality
- Water and energy braking
- The protection of tourist facilities on the coast
- Environmental hazards (fires)
- Changes in landscape (in some areas).

In 2007, the intergovernmental conference on climate change said that the rise in global warming is unquestionable and very likely that greenhouse gas emissions are and are of human origin caused a large increase in the observed increase of temperature in the mid-20th century. The work of the conference emphasized that human-caused climate change has just begun and it is

very much the pace of climate change is likely to accelerate. It is also predicted that the average temperature rise will increase between 1.8°C and 4.0 °C until 2100 (UNWTO, 2009).

The environmental and economic risk resulting from the size of the climate change foreseen for the 21st century are remarkable and they occupy a prominent position in recent international political debates. Climate change will hinder the ability of many developing nations to prosper and will also introduce the concept of risk which will continue to intensify because of the assumptions to raise the temperature of the planet. The cost of taking the initiative for reducing greenhouse gas emissions would now be far less than the cost of the resulting economic and social upheaval from the inaction to tackle climate change. While increasing temperature cannot be avoided, its future increase will depend significantly from the emission rates over the next four decades (Rutty and Scott, 2010).

Due to the close relationship that tourism has with the environment and climate it is considered that it is an area particularly sensitive to environmental changes. Tourists destinations and tourism businesses are directly affected by fluctuations of climate in a variety of ways. According to a study by the ITEP (Athanasίου, 2007), it appears that tourism is not included in the category of activities having an environmental impact; and is not blamed for any of the major environmental problems such as the greenhouse effect, over-consumption or depletion of finite stocks of materials and energy sources, the destruction of vital ecosystems (rainforests), acid rain, ozone layer, etc (Athanasίου, 2007).

The environmental and economic risk resulting from the size of the climate change foreseen for the 21st century are remarkable and they occupy a prominent position in recent international political debates. Climate change will hinder the ability of many developing nations to prosper and it also introduces the concept of risk which will continue to intensify because of the assumptions to raise the temperature of the planet. The cost of taking the initiative for reducing greenhouse gas emissions would now be far less than the cost of the resulting economic and social upheaval from the inaction to tackle climate change (Sharzatakis and Karatzoglou, 2011).

While the rise in temperature cannot be avoided, its future rise will significantly depend on the emission rates over the next four decades. On the 15th meeting of the Copenhagen political parties, the international community will try to negotiate a new climate change agreement under

which the global warming will not exceed 2°C, a level considered by many scientists that it represents a level of dangerous interference with the climate system (Sharzatakis and Karatzoglou, 2011).

The CIAC study on tourism (Climate Impact Assessment Committee), according to the international literature, it has been shown that significant action is needed immediately to redefine the Greek tourism product (Sartzetakis and Karatzoglou 2011). The results of the study showed that although climate change does not appear to have a significant negative impact on average geographically and seasonally in the Greek area, will have a significant negative impact during summer, and especially in the regions of Greece that make up the bulk of tourism demand. Therefore, climate change will have negative effects, especially towards the end of the century, if the long-standing problems of Greek tourism, namely the geographical and seasonal concentration of the tourism product, are not addressed. The study examined the impact of climate change on tourism demand using the Climate Tourism Index (or otherwise the Euphoria Tourism Index) Climate Index - TCI, as well as the operating costs of tourist units (Sharzatakis and Karatzoglou, 2011).

TCI combines climate variables, such as temperature, humidity, etc., into a single indicator designed to assess the suitability of a region's climatic conditions to support outdoor tourism activities. Using climate data estimates of the Physics Research Center research team of the Athens Academy of Atmospheric and Climatology (KEFAK), the TCI was calculated, per decade, for the period 2010-2100, per season, for the whole territory and by geographical region (Sharzatakis and Karatzoglou, 2011).

Analyzing the data on an annual basis and at the level of territory shows that, after a slight decline in the first three decades, arrivals have increased significantly. Unfortunately, data analysis at the seasonal and regional level proves that the above results are misleading, as the main tourist destinations of the country will experience significant reductions in arrivals during the summer months in the peak demand for tourism product (Sharzatakis and Karatzoglou, 2011).

The negative impacts mentioned in the EMEKA report may be mitigated or even overthrown, as tourism euphoria indexes improve significantly in spring and autumn. For example, in the case of

Crete, the improvement of the index in both these seasons is able to reverse summer losses, leading to an increase in revenue on an annual basis. These positive results are based on the assumption that the expected arrivals of tourists will occur in spring and autumn. But that requires overriding institutional factors, which limit the time of arrival of tourists by mainly in the summer months (school holidays, work permits) and together with the appropriate climate, their sizes and seasonality arrivals. This overrun requires the identification of new targeted tourism markets (retirees, weekend excursions, business and conference tourism), which are not subject to the above restrictions and of course relocation of the Greek tourism product in the perception of consumer-tourists and, most importantly, international tourist agents (Sharzatakis and Karatzoglou, 2011).

For the global tourism industry, climate change brings about more risks than opportunities. Regionals and seasonal changes in tourist flows are expected, resulting in both lost and gained by this climate change. However, it is undeniable that the tourism industry will continue to be a development sector, despite the challenge of climate change (Huybers and Bermet, 2003).

2.3. Impact of tourism on the environment

The very attractive natural environment of the Greek area, has made Greece a strong attraction for tourism. After a period of rapid growth for nearly two decades, tourism today accounts for 16.4% of the country's GDP while contributing significantly to employment and regional development. But while the number of foreign tourists arrives is a long-term upward trend, revenue from tourist activity follows a downward trend the result of the rapidly growing mass tourism. Mass tourism has parallel and serious impacts on the environment, resulting in the continuation of the same model of tourism development substantially undermines growth in the long run (Arabosis, 2006).

The most sensitive areas of tourist pressure are of course the coastal areas which comprises the main volume of tourists, as well as a large proportion of population. In addition, the coastal area is also of particular interest of natural ecosystems due to the coexistence and interaction of three essentials elements of nature: sea, land and air (Arabosis, 2006).

The most visible consequences of environmental degradation are the plethora of roads arteries along the coasts leading to tourist destinations; and crowded beaches. The irrational consumption of water during the dry season, it causes pressures on water resources, especially on small islands. High demand water, and in particular over-pumping, has multiple impacts on these areas, such as irreversible salinization of groundwater aquifers. The tourism industry is, also a producer of large quantities of solid waste. Local authorities are failing, most of the time, they cope effectively with this production. Cleaning the coasts using specialized machinery has become common practice, though these methods can cause beach erosion. At the same time, sewage treatment, power generation, medical and more services, often inadequate during peak times (Arabosis, 2006).

A Sustainable Development Program for Greece has been developed for Greece's Coast and Islands, which provided general and specific principles for the management of these areas, directions for delineating the coastal zone, sectoral directions in integrated management framework and specific proposals (Arabosis, 2006).

2.4. Impacts of climate change on tourist destinations

According to a UNWTO report (2009), climate determines the size and the quality of tourist season (for example winter sports) in different areas. Some tourist destinations are directly climate dependent as long as climate is the main source on which the tourism industry is based (for example of some small tropical islands in developing countries). The climate is affected directly different aspects of tourism businesses (water quality, the cost of heating-cooling, irrigation needs, tackling the various parasites) affecting profit.

In addition, a wide variety of environmental resources are critical as they attract tourists are sensitive to climate change, resources such as wildlife biodiversity, water quality and level, snowfall and frost. The climate also affects environmental conditions that are not pleasant to tourists such as infectious diseases, fires, algal blooms and extreme events such as hurricanes, floods or heatwaves. It still affects the reception of tourists' decisions. The seasonal fluctuations of the climate in tourist places are the driving forces for tourism demand. Weather is essential

element of the travel experience and affects how much tourists enjoy the holidays. Consequently, comprehensive results of climate change are expected that will have a long-term impact on tourism and tourism businesses. Climate change is not as distant, a future threat as its various effects are becoming apparent at various tourist destinations around the world affecting travel companies and their dependent societies (UNWTO, 2009).

Climate change is already changing tourists' decisions regarding places who choose and the time they choose to travel. This change has been positive and negative impacts on tourism and the tourism sector and its impacts vary depending on the geographical area. There are four ways in which climate change affects tourism: (UNWTO, 2009)

a) Immediate climatic impacts: Changes in the duration and quality of climate seasons dependent (e.g. sun and sea, winter sports) could have a significant impact on competitive relations between the destinations of the intra-regional flow of tourists. Other implications concern increased infrastructure damage, higher operating costs, emergency preparedness requirements.

b) Indirect effects of climate change: Tourism is often based on high quality environment. Changes in water availability, loss of biodiversity, change in agricultural production, increased numbers of natural hazards, beach erosion and flooding, damages to infrastructures and various infectious diseases affect tourism in variety of degrees. The indirect effects of climate change are particular negative. Mountains, islands and beaches are particularly sensitive climate change environments.

Table 1- Physical impacts

Direct impacts
Increase in temperature
Sea level rise
Changes in humidity and air quality
Increase drought
Increased pollution
Increase visitor discomfort
Reduce rainfall and snowfall

More common photochemical clouds Extreme events (storms, floods, hurricanes) Increase in fires and diseases Destruction of sensitive ecosystems
Indirect impacts
Damage to coastal tourist infrastructure Depreciation of tourist infrastructure due to lack of natural conditions for their use (indicative, lack of snow for ski resorts) Seawater infiltration into the aquifer and drinking water infiltration Reduction of available water due to reduced rainfall Reduction - elimination of ecotourism infrastructure and activities

Source: Bank of Greece

c) Impact of tourism mitigation policies: The internationally implemented strategies to reduce emissions the appearance of the greenhouse effect will have an impact on tourism causing an increase in transport costs and will enhance the environment attitude resulting in tourists changing their plans (e.g. changing it) mode of transport or the various destinations).

d) Indirect social impacts: Climate change will have and some financial cost. If left unaddressed, climate change can threaten future economic growth and even policy stability of some states. Any decline in world GDP due to climate change will create unpleasant situations for the future tourism development. Tourists oppose political instability and social upheavals, and will have adverse effects if due to climate change one of the aforementioned forms of instability (UNWTO, 2009).

The tourism and travel sector is characterized by great diversity and therefore there are major differences in the nature of climate sensitivities and adaptive capabilities of tourism businesses. Also its effects on climate change for every tourist business depends partly on the impacts on their competitors as well as negative impacts on a part of the tourism system will be an opportunity for some business in some other place. Estimates from different groups of experts are constantly identifying developing regions in the Caribbean, Southeast Asia and Africa with very high risk as tourist destinations because of the many impacts due to climate change

affecting major tourism products, due to distance from major markets (distance exceeds five hours travel) and due the great economic dependence on international tourism (UNWTO, 2009).

Regardless of the fact that tourism and travel businesses are particularly vulnerable to climate change, they will have to adapt to the new conditions to minimize or exploit the risks involved in new opportunities in an economically, socially and environmentally sustainable way. Given the amount of information they need, the change of strategy and the investments that need to be made to adapt tourism in new conditions will take decades in some cases, and the customization process should start immediately for the destinations that they are expected to be affected by the middle of this century (UNWTO, 2009).

With the ability to adapt to new conditions due to climate change with modifying the place, time and type of vacation they will follow, tourists will play a vital role in the future of tourism industry. They are also very willing to pay extra for environmentally friendly services and businesses that provide new products and services (UNWTO, 2009).

Tourism and travel sectors contribute to climate change through greenhouse gas emissions. The transportation of tourism is responsible for 5% of carbon dioxide emissions worldwide. The transport of tourists to the various destinations is responsible for 75% of carbon dioxide emissions produced by tourism while freight transport accounts for 40% of all pollutants. It is also predicted that carbon dioxide emissions from the tourist worldwide will grow by 130% by 2035 (UNWTO, 2009).

Table 2- Economic impacts

Economic impact of climate change in tourism
Possible decrease in the number of arriving tourists
Possible reduction of their average residence time
Decrease in seasonality
Decrease in disposable income worldwide for tourism due to the decline of GDP due to the effects of climate change
Increase in average service costs for arriving tourists
Cost of forced interruption of the offered tourist service due to extreme physical

phenomena (opportunity cost or lost revenue)

Works to reduce pollution and gaseous emissions

Projects addressing the natural impacts of climate change and emergency response (dams, water recycling systems)

Need to develop new innovative bioclimatic infrastructure

Increased maintenance cost of older infrastructure

Natural capital replacement projects with anthropogenic capital in direction of preserving the attractions of an area (eg forest substitution with theme park, mountain bike activities with carting track, lack of snow with creation of climbing track)

Degradation of cultural and historical monuments (UNESCO study 2007) and possible destruction of archaeological monuments

Cost of training and adapting staff to new media and ways of operation

Re-positioning the tourist product internationally

2.5. Climate change and marine & coastal tourism

Coastal and maritime tourism is a growing sector. For sea and coastal recreation, both for entertainment and safety, are favorable weather conditions and attractive landscapes. Climate change affects both. At the same time, tourism is an important source of emissions related to the greenhouse effect of climate change. To date, and with the exception of leisure on the beaches, most studies have done concern climate change and tourism have either focused on the impact in whole countries or large parts of the earth or in specific ecosystems such as coastline, focusing on a single activity and overlooking the wide variety of and very different weather requirements for other activities that can take place in these environments. This study focuses on the great importance of coastal and marine environment for recreation, presents up-to-date data on the effects of climate change on these environments and identifies the scientific gaps that exist. This study provides contemporary data to understand the relationship between climate change and the sea; and coastal tourism and suggests some places that should in the future explore (Moreno and Amelung, 2009).

Marine and coastal environments are considered particularly vulnerable and are particularly affected by climate change (IPCC, 2007), with significant implications for tourism activity. Despite their great importance for tourism and tourism recreation and the fact that they are particularly vulnerable environments, the researchers that were studying marine and coastal tourism were failing to study the problem of climate change while researchers studying the impact of climate changes in tourism, focused on limited activities related to sun and sea (for example, tourists' preferences for the weather, effects on recreation, effects on various destinations). Other activities related to this type of leisure such as sailing or observations of wild marine life have been hardly studied at all (Moreno and Amelung, 2009).

According to Hall (2001) coastal tourism covers the whole range of recreational activities carried out in the coastal zone. They include coastal tourism development (accommodation, restaurants, industry and work related to infrastructure development (retail business sales, marinas, supply companies). Maritime tourism includes activities such as sailing and deep-sea fishing (Moreno and Amelung, 2009).

Climate change and tourism are related in a circular way (Patterson et. al, 2006). Climate has a direct impact on (a) the physical, environmental and social resources necessary for tourism; (b) their comfort and safety of participants. At the same time, tourism contributes significantly to the change of global climate due to human intervention due to the release of contributing gases in the greenhouse effect and is related to accommodation and transportation (Moreno and Amelung, 2009).

The extent to which the multitude of maritime activities relate well depending on the weather and climate change varies. While for some activities the relationship is direct and easily observed (for example sunbathing requires some minimum temperature and clear sky), in other cases the relationship is less obvious (for example the weather conditions that are necessary for the observation of wildlife, the impact of climate change in animal populations). This is one of the reasons why researchers are beginning to understand the potential threats to tourism activities due to climate change. As a consequence, the existing research on climate change and tourism is characterized as unbalanced as well now most of the attention was focused on activities that were more relevant directly with the weather (Moreno and Amelung, 2009).

Coastal destinations and small islands have been the focus of research (Moreno and Amelung, 2009) on climate change because they are particularly vulnerable increasing sea level and coastal erosion. Also these parts have a significant economic dependence on tourism (Becken, 2004). Studies on the impact of climate change on tourism activities are gradually increasing. In many cases, the impact on tourism are of secondary importance, and more important are the impacts on the ecosystem that is also the basis of tourist activity. The substantive evaluation of impact needs sufficient prior knowledge of the impacts of climate change in the natural environment. An example then, (Moreno and Amelung, 2009) connects diving tourism with reefs. Initially some research has focused on the observation of corals and their degeneration due to the whitening that exists (Donner et. al., 2005, Walther et. al., 2002), whilst secondly, the socio-economic impacts on the various were studied tourist destinations (Andersson, 2007).

A second example in the study of Moreno and Amelung (2009), has to do with the observation of wildlife affected by habitat degradation and the consequences for the different types of organisms. According to some data climate change affects not only species of different species but also their migration patterns, breeding seasons and their overall distribution (Penuelas and Filella, 2001). As such phenomena attract the interest of tourists climate change will also indirectly affect tourists traveling to these areas to observe these phenomena. Probably the most typical example is the impact of climate change on polarities bears. Many researchers have reported habitat degradation and its degradation population decline (Derocher et. al., 2004, Stirling and Parkinson, 2006, Tynan and Demaste, 1997). Only recently has an impact study been carried out of these changes in the economy of the areas that depend on the observation of polar bear (Dawson et. al., 2007).

2.5.1. Mediterranean tourism

The Mediterranean is the world's most famous tourist destination. The international mass tourism began to develop in coastal and island regions of the Mediterranean basin after the Second World War. In the 1950s tourism developed in many regions of Spain and Italy. In the 1960s Tourist Development began to occur in regions of Greece, Malta, Cyprus and the countries of the former Yugoslavia, while at the same time the number of tourists increased rapidly. Since the decade of

1970 mass tourism has started to grow further south in countries such as Morocco and Tunisia. So the area of Mediterranean became the world's most popular centre for mass tourism. This tourism development in the Mediterranean area has brought many changes in tourism practice and policy. These changes were an important area of interest for the tourism development of coastal and island regions around the world. Climatic factors such as temperature, sunshine, and the appearance of rain play a vital role for the tourist traffic around a destination. Statistical analyses by (Madison 2001, Lise and Tol 2002, Hamilton 2003) and a simulation study (Hamilton et al. 2003) demonstrate the relationship between climate factors as determinants of tourism demand. In tourism, climate conditions have been taken for granted because of their supposed long-term stability. Today the climate as a whole is changing as a result of carbon dioxide emissions. This climate change can alter the relationship of the climate conditions of tourism in Europe.

The Mediterranean because of its advantageous position in relation to its geography, its location, its mild climate, its natural beauty and its cultural heritage, is the main tourist destination worldwide, attracting about 30% of the world's arrivals and possessing 28% of the world's tourism revenues. Three states in its region, France, Italy and Spain, are among the ten largest tourist destinations on the planet, being the countries that have the largest net income coming from international tourism. France, Italy and Spain produce an important tourist product. In these developed tourist countries, there is a moderate population growth of 2.4%, due to the increasingly intense trend for more qualitative tourism. In the Decades of 1960 and 1970 this increase was clearly greater due to the appropriate economic and political conditions prevailing in these States and because the culmination of international tourism was a much more recent phenomenon it was based on politico-economic changes that occurred in an area much broader than that of the Mediterranean (Madison 2001, Lise and Tol 2002, Hamilton 2003).

In Europe, no significant changes are expected in its tourist market. The tourist traffic of the region shows that the massive majority (about 90%) Tourists prefer to visit the European shores of the Mediterranean, while this rate is constantly increasing. On the contrary, only a small number of tourists move to the African (6.4%) and Asian (1.3%) Coastal parts of the Mediterranean. It ensures that European Mediterranean countries will continue to play the dominant role in tourist destinations. To analyze the tourist movement in the Mediterranean, the

importance of some countries producing tourism for this region should also be highlighted. With the exception of France, the main tourism producing countries (Germany, Great Britain) are not placed in the Mediterranean. The tourism flows of these states show that the movement in the Mediterranean countries not only remains high, but shows growth trends. Also the cross-border and interstate traffic (excursions and tourism) possess a large part of Mediterranean tourism. The volume of foreign exchange inputs depends on the intensity of the tourist flow and the composition of visitors by nationality. France, Italy and Spain hold the largest volume of revenues from Mediterranean international tourism reaching 82% (PAP/RAC, 1993).

On the other hand, the largest increase in tourism revenues is observed in the countries of the southeastern Mediterranean. Forecasts for global tourism flows show that regardless of structural changes (mainly in the quality of tourist supply and further segmentation of tourism markets) existing trends will continue. What is needed is the constant adaptation of the tourist products and services provided to the changing demand and the remodeling of tourist advertising. The Mediterranean as a whole has not yet been saturated and will continue to be a top destination for international tourism which will continue to depend on the conditions of political and economic stability, since visitors choose the safest and best environmentally-maintained areas (PAP/RAC, 1993).

2.5.2. The impact of Mediterranean tourism

The Mediterranean region presents an annual increase in both the number of tourists who visit it and the financial rewards of them. For this reason it is very difficult to think that the Mediterranean will lose its primacy from the world tourist map. However, this great Mediterranean tourism development had many influences in the areas that took place. The effects of tourism are both positive and negative (Rutty and Scott 2010).

In the first category, one that can mention is the increase in the gross national product (GDP) of its countries, the creation of new jobs, the improvement of the standard of living and the increase in investment. The second category refers to the reduction of biodiversity, the disappearance of various species of plants and animals, the increase of pollution, the increase in carbon dioxide

emissions, the over-exploitation of natural energy sources and natural wealth, violation of the morals and customs of many regions, congestion in coastal areas (Rutty and Scott 2010).

The impact on the environment due to tourism in the Mediterranean is now visible in many areas, which were underdeveloped before tourism development, characterized by the functioning of traditional societies and often sensitive Natural environments in coastal areas. Nevertheless, the tourist activity was only one of the many important influences that changed the region during the post-war period. Some other factors contributed in shaping the current situation were economic change from traditional agriculture to systematized cultivation, development of building activity, development and expansion of regional Economy (Ehmer and Heymann, 2008).

As recent years in the Mediterranean countries have increased the challenge of the benefit of tourism with regard to environmental and socio-economic impacts, leaderships at local, national or European level within the Union; They have taken measures, in the creation and implementation of social, environmental protection and economic sustainability programs and in defining strategic policy frameworks for tourism. Policies were particularly concerned with coastal and island regions which are particularly environmentally sensitive (Ehmer and Heymann, 2008).

2.6. Natural resources and tourism

Energy production most of the time requires some non-consumption renewable natural resources. In areas and seasons of intense tourist activity, the need for energy consumption is increasing sharply with the burden on the environment. It is very important to promote the use of renewable energy sources such as the sun and air to reduce the consumption of non-renewable natural resources and to introduce more environmentally friendly techniques. At the same time, is required to be taken measures by all stakeholders to reduce energy consumption to tourist and other facilities. Some of the main initiatives that can undertake a tourism business regarding (WWF, 2010):

- Use of renewable energy sources

- Using low energy devices
- Use of low energy lamps
- Automatic switch off lighting indoors
- Sensors in the frames for switching off air conditioning
- Plant / equipment maintenance
- Avoid disposable products
- Use green for shading, cooling and carbon dioxide absorption
- Change clothing at customer's request
- Promotion of waste recycling
- Implementation of external thermal insulation systems to save energy.

2.7.Impact of tourism on ecosystem function

The disruption of ecosystem function is not solely due to tourism development, but tourism development itself can be a significant burden their function in some cases. This is because of the extension of infrastructure and settlements to meet increased needs, to the detriment of the natural of land. The phenomenon of urbanization of the natural landscape and of one of the most serious negative consequences of traditional housing sets tourism development and activity (WWF, 2010).

The large tourist units that do not harmonize with its aesthetics landscape, invade natural ecosystems, affect the hydrological cycle and microclimate of the area. A very important issue is the prevention of trafficking and communication of species, which are trapped in a limited living space due to the uncontrolled construction, the noise caused by humans and the movement of vehicles (WWF, 2010).

The design, construction and expansion of the road network or airports affect them natural ecosystems as it involves deforestation and the fragmentation of the natural space. It affects natural processes, such as species reproduction as it is impossible to communicate with populations. The restricting species communication reduces diversity at the gene level, which leads to the weakening of the species and the degeneration of their characteristics (WWF, 2010).

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An important step for better tourism development is to adopt companies certificates of good environmental management. At the same time it simplifies procedures for stakeholders on how to choose the most appropriate structure and makes it easier for competent bodies to carry out scrutiny on compliance with environmental principles. The role of one NGO tourist destination can focus on alert, information or even actions training of stakeholders and residents in tourism activity in issues of management, protection and restoration of natural ecosystems (WWF, 2010).

2.8. Environmental problems in tourist areas

Tourist activities, especially when they are developed, without taking over necessary measures to protect the environment in the places and areas of destination, can cause serious damage to it. These damages can, except their adverse environmental impact to directly harm tourism activity because the accumulation of environmental problems has an adverse effect to the preferences of visitors, thus limiting demand (Athanasίου, 2007). In general the main ways in which tourism development can damage the environment at tourist destinations, especially in areas such as the Mediterranean basin and in particular its coastal areas are: (Athanasίου, 2007)

- Over-pumping of water when visitors to an area are concentrated and meeting their needs for drinking water, for swimming pools, for irrigation of golf courses, etc. goes beyond their natural capacity stocks of the aquifers in question. Contamination or deterioration of the water quality of the recipients when the opportunities for proper treatment of waste water compared to their volume and other characteristics are not sufficient.
- Risks of contamination or degradation of the environment due to deficiencies; or weaknesses in the tourist waste management system activities.

- Loss or degradation of coastal biotopes or wetlands, adverse impacts on the survival of animal or plant life forms loss and loss of greenery.
- Illegal or uncontrolled construction, which leads to degradation of the natural and built environment and its aesthetic level.
- The creation of seasonal congestion and related creation needs for new transport infrastructure and transport infrastructure projects, which sometimes they are deployed in a way that leads to environmental degradation sensitive areas.
- Causing fires.
- Abandonment of other forms of productive activity, mainly in agriculture, leading to degradation of the quality of the natural environment.

Satisfying the water needs arising from tourism development it is of particular importance for Greece because many of the island regions in particular is comparatively anhydrous and the tourist season is its most humid year. The problem is tackled by water transport by watercraft from other water poorer areas of the country, at a very significant cost as well as with implementation, in some cases, of infrastructure projects for the collection of surface runoff during the rainy season. To the extent that over-pumping occurs there is a serious risk of sneezing, which in many cases is not reversible or hardly reversible (Athanasidou, 2007).

With the further development of tourism in Greece especially if it is possible to increase the share of higher quality tourist services, as it is intended, problem can be exacerbated. Overnight water consumption is increasing function of overnight tourism expenditure and for high tourism level significantly exceeds the corresponding average consumption for permanent Greek population. In recent years the overnight water consumption in Luxury hotel units were around 450 liters versus average daily per capita consumption for Greece of 300 liters. Special attention must be paid for during development planning to avoid or at least restrict particularly water-intensive uses (eg golf courses, swimming pools), in areas where aquifer supplies are limited. Another way of limiting the consequences of developing forms of tourism or uses with increased water needs are the use of recycled quantities (e.g. lawn irrigation or as mentioned, golf courses) (Athanasidou, 2007).

Tourism development, especially in the areas with the highest concentrations of visitors, has led to deterioration of environmental conditions, in particular to more fragile ecosystems, in all Mediterranean EU Member States. In Spain, for example, it has been observed that, as a result of tourism activities, have been introduced foreign fauna or flora species in protected areas, consequently being created risks to their ecological balance. In other areas the close proximity of centers of tourism development with protected habitats or wetlands disrupts the function as wildlife sanctuaries. Both for the restoration of environmental conditions in sensitive ecosystems as well as for conservation environmental resources that can become attractions for ecotourism, measures are similar to those in other Mediterranean EU member states have been received in Greece (Athanasίου, 2007).

The needs arising from tourism development for project expansion infrastructure creates pressures for performance on new land uses which, by environmental considerations, in some cases, are not offered. In these cases either other solutions must be sought or, where necessary, barriers are put in place further thickening of tourist activities in areas where already the phenomenon has taken on an extent that tends to deplete the carrying capacity (Athanasίου, 2007).

It has been observed that the incidence of fires is higher in areas with dense tourist activity. This is partly a natural consequence of the densification of human activities and human presence in them. But it is also linked to malicious activities aimed at altering them illegally land use, for economic gain. Some traditional economics activities, especially in the primary sector, had an indirect beneficial effect on the environment. Their abandonment due to the shift of the workforce to more cost-effective tourism activities cause environmental damage (Athanasίου, 2007).

CHAPTER 3

THE GROWING DEMAND OF SUSTAINABILITY IN TOURISM

3.1. The concept of sustainability

Tourism development is not an autonomous goal for an area, but it is linked to all the economic activities that take place there. In addition, its success cannot be measured solely by the number of tourists visiting an area - even if it is a significant base variable - but by the impact it has on the host region's well-being of the local population. This is based on the performance of the tourism activity and more specifically on the tourism expenditure and employment created in the area and how it affects the economy and society (demography) of the area. According to conventional economics, tourism has a direct impact on the region's GDP and overall employment as well as any other activity and these are the key indicators for assessing the development of an area (Sharpley, 2009).

By extending the condition that has been set for its sustainable development of humanity, the term sustainable tourism refers to the coverage of tourism the needs of this generation without hindering future generations to meet their own future needs (Weaver and Lawton, 2006). Everybody who are involved in tourist activity and no matter who it is their role, that is, entrepreneurs, employees, members of the host society tourists, local authorities and governments must respect the environment. Tourists also need to travel and vacation with respect to the environment and aware of the effects it has on their actions. It is easily understood that the issue of sustainable tourism growth concerns the vast majority of the population either directly is active in the tourism industry, either because he participates as a tourist or still because it is indirectly affected by this area. So we could say that it is a matter of concern and concern of all the world, so that their actions and actions are in harmony with the above principle of sustainable development (Sharpley, 2009).

"Sustainable tourism meets the needs of current tourists and the receiving regions and at the same time protects and fosters opportunities for the future. It is conceived as a way towards the

management of all resources so that economic, social and aesthetic needs can be met, while respecting cultural integrity, essential ecological processes, biological diversity and life sustaining systems." This definition of sustainable tourism (responsible tourism, ecotourism, "slow" tourism), has resulted in the consideration of a series of requirements that the UNWTO (1994) considers fundamental for the implementation of Agenda 21 in the tourist centers:

- Waste minimization.
- Conservation and energy management.
- Water resource management.
- Control of dangerous substances.
- Transportation.
- Urban planning and land management.
- Environmental commitment of politicians and citizens.
- Design of programs for sustainability.
- Collaboration for sustainable tourism development.

The emergence of the concept of "sustainable development" as a framework for assessing human well-being (which ceases to be exclusively economic but also social and environmental), leads to two major changes to the existing approach (Sharpley, 2009):

- Firstly, the assessment of the impact of tourism is not only based on its contribution to the economic development of the region (economic efficiency), but also to its contribution to social justice (by examining the diffusion of benefits to the various social groups by achieving intrinsic equality) and environmental conservation (with the aim of continuing to provide resources and services from the environment).
- Secondly, evaluation refers not only to the short-term (e.g. the annual increase in size) but also to the long-term perspective, since the conditions for prosperity and future generations should be ensured mainly through the transfer of human quantities, anthropogenic and natural capital. The sustainability of tourism activity is included and therefore the preservation of natural, cultural and productive capital (i.e. destination destinations) and human capital is a long-term goal.

In the proposed approach tourism is seen as the driving force behind economic, social and environmental changes that affect the status of the destination. These changes depend on the intensity of the activity and its performance. The intensity of tourism can be measured by (Sharpley, 2009):

- Offering by number, type and size of tourist infrastructure (accommodation, restaurants, marinas, golf courses, conference centers etc) but also of general infrastructure (eg roads, ports, airports, water supply, sewerage, energy) etc) which are necessary to meet the tourism demand and the overall development of the region. The construction of infrastructures permanently affects the land uses of the destination while generating temporary economic impact and employment in the construction sector, while their operation produces lasting results.
- Demand, through the number of tourists visiting the area with a unit of measure, overnight stays in the different types of accommodation.

Of course not all tourists have the same behavior and therefore do not produce the same results per head. The sum of all these results constitutes the overall performance of tourism depending on the number of tourists and their daily behavior. The latter (per head and per night performance) can be considered as the basic unit of measurement for inter-spatial and inter-temporal comparisons (Sharpley, 2009).

At a second level, the immediate economic, social and environmental impacts of tourism have on destination (Sharpley, 2009):

- Total tourism expenditure is a factor in changing the local economy, which can be measured by the change in GDP but also by the change in the structure of the economy due to direct, indirect and secondary demand with the emergence of new activities with direct or indirect relationship by tourism but also by eliminating existing activities that are less profitable, diversifying public and private investment, etc. These changes affect the economic efficiency of the area as well as change the competitive (export) sector or simply increase imports. It should be emphasized that maintaining a competitive export sector is a critical factor for sustainable GDP growth and employment in each destination region, generating multiplier effects. On the contrary, the increase in imports widens the

gaps in income and employment and shrinks the production structure with long-term negative effects.

- Total tourist employment (direct, indirect and derivative) is in turn a factor for changes in the structure of the population in the region, as it can change the percentage of active and employed population, the percentage of employed women and young people, migrants flows, aggregate income and income distribution, affecting social justice in the region.
- Finally, the overall environmental pressure resulting from direct, indirect and derivative socio-economic changes affects the ability of the destination to provide environmental goods and services given the changing stocks of resources (e.g. availability of drinking water, seafood, quality, seawater etc.) which involves both land use change and resource consumption and waste generation. The quality of seawater, the quantity and quality of drinking water available, the habitats available, the quality of the soil, the atmosphere, the rural and urban landscape are the main issues to be assessed for environmental conservation in the area (Sharpley, 2009).

3.2. Motives for sustainable tourism

According to the data presented at the SETE Conference, visitors to Greece in 2018 (along with cruise guests) exceeded 33 million. On average the expenditure per tourist amounted to 520 euros, while everyone left behind ... 2 kg of trash. Elements that are intended to reflect on and become the stimulus for interventions on the country's infrastructure. Now, 68% of tourists want eco-friendly accommodation that will use Renewable Energy, Green Certified accommodation, etc. Scandinavian travelers are also susceptible to the use of airplanes because of high emissions, as mentioned in the recent Economist conference on sustainability, which focused on sustainability and sustainability (EnergyPress, 2019).

The tourism industry is a key pillar of support for employment and the economy. One of the rising forms of tourism is cultural tourism. The environment - especially the urban one - is under significant pressure from the development of tourism. Historic settlements and monuments are overwhelmed and threatened by large numbers of visitors each year. It is therefore important to

implement policies and strategies to ensure the sustainability of tourist destinations. After all, it is a given that cultural, environmental, and social, ultimately, equilibrium can only be achieved through sustainable development (Gissling et. al., 2002).

According to Weaver and Lawton (2006), there are several factors that contribute positively to the adoption of environmental management practices in the field of tourism and dealing mainly with ethical issues, with the constant increasing public interest in more "green" consumption and so on economic benefits resulting from these actions. More in detail this emphasizes the importance of business ethical responsibility towards a society that increasingly urges those who have an impact on environment to take measures to mitigate the negative impact on it (Gissling et. al., 2002).

So it is easy to see that business people have to more positively address the issue of environmental management or why they have really realized the importance of the subject, either because they are afraid of that if they are not doing it so there is a risk of being criticized, of facing the negative publicity but also in a more extreme case, threatened by the possibility a boycott by their clients.

In recent years it has been observed that people are more aware of the problems facing the planet and is constantly looking for ways to help and protect the environment. This awareness of environmental issues has led constantly an increasing proportion of the population to change behavior in their daily lives, even in its consumption habits. According to Han et. al. (2009) there are many studies that show exactly this, that a larger proportion of the population has a more responsible attitude towards environmental issues of our planet, and that leads to more ecological behavior in their daily lives but at the same time greater desire to buy more environmentally friendly products. So there is a growing movement in our modern society where various criteria and perceptions lead a part of the population to consciousness buying eco-friendly products and services, what's called "green consumerism" (Moisander, 2007).

Schaltegger and Synnestvedt (2002), argue that no matter which can be the primary goals of a business, that is, to grow its profitability, to gain a greater market share, to improve its social profile etc, good environmental management can provide it with financially benefits and cost savings and thus maximize its value. Although they state that there is controversy as to whether

the existence of environmental policy is profitable for a business or simply imposes more costs on it, however, they argue that a business can come out of this process multiple won. More specifically a company seeking to increase its market share can also be managed through good environmental management of appropriate eco-marketing and communication techniques to achieve this. Besides with the appropriate implementation of ecological programs and measures has the potential to reduce costs and increase its productive efficiency, as long as to adopt appropriate methods, establish environmental audits cost as well as the financial evaluation of the investment. That's how it will be in position to calculate and analyze data and evaluate it for successful more effective measures. Anyway beyond the immediate economic benefits that ecological actions can bring there are also and some indirect benefits of implementing environmental practices (Weaver and Lawton, 2006). The moral satisfaction that feel the employees of companies who are involved in ecology-related actions are definitely something that tourists who come to a destination perceive positively and combined with the general satisfaction they may feel from their overall stay can create the right conditions to visit the place again or recommend the destination and business to a friend or family member. Environmental practices therefore can be an additional positive cost-reducing factor, creating repeat customers, increasing its satisfaction staff and at the same time enhancing the competitiveness of the business (Kassinis and Soteriou, 2003), thus creating positive conditions publicity for the business and increased sales in the near future.

3.3.Actions for sustainable tourism

In 2002, in the global action plan of the World Summit on Sustainable Development, which took place in Johannesburg ten years after the First Earth Summit, the document was prepared: "River +10: Red card for tourism?" which collected Ten principles and requirements for the sustainable development of tourism in the 21st century, emphasizing *"The political will to respect human rights and to obtain a balance of interests between the environment, the economy and society it is indispensable at all levels, so that the next generations everywhere can live with dignity, enjoy their free time and travel. "*

On the other hand, the "Green Economy Report" (2011), published by the United Nations Environment Program (UNEP) (See Economics and Sustainability) has a section dedicated to tourism in which it is stated that its well-planned development can improve the local economy and reduce poverty. And add that *"although tourism growth has been accompanied by significant difficulties, for example, in terms of greenhouse gas emissions, water consumption, untreated water discharges, waste generation, damage to terrestrial and marine biodiversity or threat to the survival of local culture and traditions, tourists are driving the greening of the sector, as evidenced by the 20% annual increase in ecotourism (.). In the greening of the sector tourism, the participation of the local community, especially the poorest, in the tourism value chain, is essential to develop the local economy and reduce poverty."*

In short, effective measures are necessary to ensure that, as the United Nations claims, tourism activities are organized *"in harmony with the peculiarities and traditions of the receiving regions and landscapes (...) so as to protect the natural heritage that constitutes the ecosystems and biological diversity"*(Honey, 2008) and, it should be added, cultural.

It is contemplated, for example, the implementation of the label "fair trade" or, more specifically, "sustainable tourism", as a guarantee that a tourism company uses sustainable procedures, respectful of the environment and people, in accordance with the legislation introduced to preserve what is left of the natural world, such as the Wild Law. In that direction, there are also proposals to introduce "pets", with the idea that the polluter pays the decontamination or that the tourist who contributes to the compensation of CO₂ emissions (due, for example, to air travel) and to the maintenance of the natural areas visited (www.ceroco2.org).

And although this is not enough, these environmental measures can be a good help even for citizen awareness and have already begun to be implemented, with a very positive response from the affected tourists, who believe that they are thus involved in environmental or ecological restoration (recovery, improvement and conservation of natural heritage).

In short, a demand for tourism that respects the environment and people begins to grow, which conforms to the requirements of the "New culture" (of mobility, energy, urban, water...) and that therefore bets on for minimizing the pollutant emissions generated by the trip, for valuing more small local hotels to large hotel chains, for contributing to the protection of the area with pets,

instead of seeking the lowest prices at the cost of operating workers and environmental degradation.

3.4. Environmental management in hotels

In recent years, an increasing number of the population has increased concern about its consumer habits and their impact to the environment. Indeed there is a growing number of consumers with environmental sensitivity, who are looking for environmentally friendly products and in some cases are even willing to buy if they are more expensive than other competing products (Han et. al., 2010). This change in consumer behavior is also observed in tourism sector since more and more customers staying in hotels seem to be more aware of the environmental impacts of the operation of hotels. So negative environmental impacts associated with the operation of hotels seem to affect the judgment of consumers who are increasingly looking more hotels that implement environmentally friendly practices (Manaktola and Jauhari, 2007).

Businesses in the tourism sector recognizing the need to protect the environment (Huybers and Bennet, 2003), have begun to respond to their clients' desire for a more environmentally responsible attitude issues (Bohdanowicz, 2006). Since the mid-1990s there have been too many many hotel chains but also individual hotels that received specific environmental actions and programs such as: linen reuse, recycling programs, low lighting consumption etc. (Honey and Stewart, 2002). There is plenty of evidence of that many hotels have not only been able to reduce energy and water costs but also increase their sales thanks to the application of specific environmental management practices (Scanlon, 2007). According after all, with a lot of customer surveys of hotels (90%) would prefer to stay in a hotel they apply environmental management policies (Han et. al., 2011).

3.4.1 Benefits of adopting green practices in hotels

The reasons why a hotel would apply "green" practices that many respect and protect the environment. Beyond the obvious economic benefits of such actions, such as its reduction of

energy consumption and reduced operating costs, a hotel still benefits from improving the company's brand name in many respects is treated favorably by public opinion and thus complies with the legislation and thus avoids the potential risks of imposing financial penalties and negative publicity (Han et. al, 2010). Especially if we think about the increasing tendency of consumers to look for hotels they are implementing green practices in their operation, these hotels can with the right designing a marketing strategy to improve their competitive position of attracting more customers. So it is easily understood that a hotel that applies a 'green' policy actually shows that it respects the environment and with practices to save energy, water and reduce waste tries to reduce its environmental footprint by contributing this way of trying to save our planet while at the same time it also acquires a significant comparative advantage in the arena of competition.

Bridging the link between environmental management and finance of business performance presents two conflicting views (Kassinis and Soteriou, 2003). On the one hand it is argued that environmental management in particular it brings additional costs to the business and therefore reduces its profitability while on the other hand there is the view that if a company is doing the right thing environmental management in its operation then has more savings and increased sales i.e. better financial results (Schaltegger and Synnestvedt, 2002). However it should be noted that the financial results the implementation of environmental management in a company is highly dependent by how it is implemented.

Many times the dangerous phenomenon has been observed where businesses, not only in the hotel industry, taking advantage of the dimensions it has ecology and consumer sensitivity to present a corporate image which is actively interested in and applies environmental management practices, while in fact this is not the case (Weaver and Lawton 2006). The so-called "Greenwashing" is an unfortunate method of public relations and marketing that aims to deceive the public's sensitivity to the environment and to gaining reputation, customer service and financial benefit. These practices have significant negative impact on both consumer behavior and in business profitability. To avoid confusing consumers and limiting false business statements is required of some kind objective, external certification of business statements. Beyond ISO certification provides organizations that provide more specialized certifications of environmental actions at sectoral level (Weaver and Lawton 2006).

3.4.2. Certification of environmental actions in hotels

The tourism industry as a whole is responsible for 5% of the world carbon dioxide emissions (2005 data) that has significant responsibility for the continued deterioration of climate change (UNWTO, 2012). So, the World Tourism Organization (UNWTO) proposes some measures that are good for the tourism industry to reduce its environmental footprint imprint. In particular the hotel sector, which is responsible for 21% of the carbon dioxide emissions of the tourism industry, has the ability to make a significant contribution to reducing the problem if it takes action to reduce the energy it consumes if it switches to renewable energy but also if it succeeds in shaping the options and consumer behavior of its customers. More specifically in order to save energy hotel accommodation can settle better insulation, make better design in the construction of buildings and make organize more efficient energy management systems. They still have the ability to choose renewable sources (bio-fuels) and solar energy for energy saving. It is also advisable to take initiatives of hotels to inform and sensitize their customers on energy saving and the overall initiatives that they receive (Schaltegger and Synnestvedt, 2002).

In order for a business to actually state the practices that follow comply with environmental management rules and avoid risk to dispute, seeks objective certification of the methods used . To make this a business that has or even wishes to adopt environmental standards, can be certified through a specialized agency. This body, which may be state or an independent non-profit organization, it sets strict criteria and specifications of compliance for proper environmental management with stakeholders companies wishing to participate in the program. Then, with the strict of quality control mechanisms investigates whether a prospective business, in practice, follows the standards set by the organization. Since test results are positive then the organization certifies the business. By this way a company gaining certification, except that avoids the risk of being unfairly accused of green washing, it also benefits since this certification can be an advertising medium that can promote to the customers, the general public but also to all concerned (Weaver and Lawton, 2006).

Certification programs in the tourism sector are a very important tool that enables businesses to consciously offer products and environmentally friendly services to distinguish those businesses

that they arbitrarily display a "eco-friendly" image, while in fact they practically do nothing essential in this regard (TIES, 2013). Environmental certification programs can yield a number of significant benefits to both businesses that earn a brand certification, as well as for clients, governments and society at its whole. The most important advantages for businesses are how in order to be certified for their environmental management, they go through by a learning process that allows them to know in-depth its factors which have a significant impact on the environment sustainability as well as intensify efforts to improve the points of those that are lagging behind. In addition, certifications help businesses to save a significant part of their operating costs through reduction in the consumption of energy, water and fossil fuels without even having no impact on the level of their services. Even with the certification mark in their hands, businesses gain a strong ally in their design. Appropriate marketing strategies as more and more consumers show how they recognize the companies' efforts for protection of the environment, and the view that it is willing to pay more for the services they offer companies with certification mark (Bastič and Gojčič, 2012).

The environmental programs also increase public awareness so that act with greater environmental awareness and care in their consumer habits. So customers for their part have the ability to easily identify environmentally certified businesses and to choose more consciously, those businesses that better satisfy their desire for greater environmental credibility. Of course, in addition to businesses and customers, these programs also help governments and local communities. Governments in particular benefit as certifications increase levels of hygiene security and social stability while reducing needs of public expenditure on environmental protection measures. Still the businesses that are certified with an environmental management label demonstrate in practice that protect the environment and show respect for the natural landscape and culture of the area, so does the local community benefit as well this shields the natural landscape and creates prospects for the long term economic growth of peripheral regions (Honey and Stewart, 2002).

There are many international and local quality systems around the world and certifications for environmental management in all areas of tourism industry for hotels, restaurants, airlines, travel offices etc. The most widely used environmental management system is the ISO 14001 and its principles are based on most of the certification programs including Green Globe, Green Flag,

Green Key (Honey and Stewart, 2002). In accordance with ISO standards, the system environmental management is defined by the organizational structure within the business which seeks to implement it, planning activities and activities processes and the establishment of policies to be implemented (Chan, 2008).

3.5. Ecotourism - alternative tourism

The environmental problems created by the huge increase in tourism as well as the growing awareness of the population ecological issues have led to more action-friendly actions for the environment and nature. So from many involved in the tourism sector attempted to find alternative proposals for mass tourism which dominated as a model of growth and the creation of perspective development without the balance of the ecosystem is disturbed (Komilis, 2001). As a result of devises a different method for sustainable tourism development the concept of ecotourism is presented. Ecotourism is a sustainable tourism aiming at the harmonious coexistence of the tourist with the natural landscape and minimization of the impacts of the various tourism activities on the environment (Neto, 2003). It is a gentle and responsible form of tourism that looks bigger respect for the environment and therefore for humans (Gössling et al., 2002). Honey (2008) argues that ecotourism is a panacea for all the world, a field that through scientific research can be an investment in environmental protection and protection of the vulnerable; and virgin ecosystems to benefit rural areas; and region but also to provide growth to poor countries while at the same time highlight the environmental concern of society through tourism industry.

In 1990 the first organization for ecotourism internationally has defined ecotourism as "*the responsible expression of the tourist phenomenon in sites with natural beauty that preserve the environment and improve the living level of local community.*" The principles governing ecotourism concern are creating the right conditions to provide a positive experience for tourists, to provide economic benefits to local communities, to maximize environmental sensitivity of the local community, to provide extensive information to population on environmental issues and of course offering help to minimize the negative impacts of the environment on the environment from tourist phenomenon. These principles translate into the belief that ecotourism to achieve the

sustainability of the tourism phenomenon accordingly always with a view to protecting the environment and local communities. Especially in areas where there is no tourist traffic or at least it is *very low the effect*, ecotourism can be in the form of activities that can highlight the natural environment and the local culture can offer different dynamics in striving for sustainable tourism development (Hunter, 1997).

Alternative tourism, a concept related to ecotourism, refers to activities that emphasize maintaining traditions, promoting of local character and small-scale development. Alternative tourism is also based on actions of individual or small number of tourists and o in no case refers to mass tourism. Inskeep (1987) mentions some alternative forms of tourism that are different from the conventional form of mass tourism. An alternative form is "quality tourism" referring to highly regulated development and limited area. The purpose of this form of tourism is to provide quality services that can be accessed through selective marketing a smaller number of tourists, however, who are willing to stay longer days and spend more money on common tourists. So economic benefits are great while environmental and social impacts are significantly smaller. Another form of alternative tourism that is also based on limited area development is attracting tourists expert "that is, people who are interested in activities such as diving, mountain biking, wildlife photography etc. Also and this form of tourism requires special marketing techniques aimed at small market segments to identify social groups that want to visit a destination to make a favorite activity or occupation, but also to get closer to nature. The activities must be environmentally friendly and non-environmental friendly disturb the natural landscape. Rural tourism is also a special form tourism, as it enables tourists to experience the original experience of staying in a village and under the daily conditions of life rural people. Visitors come closer to nature and can participate in activities related to rural life, thus creating a unique experience quite different from what they are used to their daily life while at the same time participating in this tourist activity minimizes the natural environment (Honey, 2008).

CHAPTER 4

METHODOLOGY

4.1. Methodology

The aim of scientific quantitative research is to generalize description of one or more population variables as well as an explanation of the relationships between population variables. Therefore it is needed to gather and analyze information on its various variables of population. Because gathering information is a difficult, time-consuming, accurate and sometimes impossible process, information is collected from a population sample and based on the data (s) we selected from the sample we carry out the analyzes. These analyzes are based on data of the sample, which are deliberate and strictly scientifically selected in accuracy. In this case we will carry out a Sample Survey: Process of collecting observations of individuals, characteristics, attitudes, etc. by a population.

Population: the sum of the units of which a sample / sample: the part of the population selected by population. They are part of the population. The sample is selected from sampling frame ie population list, which in theory should include all cases involving the population. The smaller the population, the more the population identifies with the sample. The opposite is true when the population is large. Because the purpose of research is the reference to the population we use Induction based Statistics to analyze the sample data.

4.2. Sample

All members of the population have an equal chance of being elected. Random Theory sampling (based on the possible fluctuations of its members population) was used. Random samples are the most appropriate in scientific empirical research because they are representative and also allow the use of the probabilities of induction from the sample to the population. Not accidental samples cannot give generalizations of the sample to the population, because are not

representative of the population, but are used in descriptive surveys, where a complete census cannot be carried out (e.g. substance users, illegal immigrants, etc.).

The sample are tourists in different hotels in Chalkidiki.

Initially, 115 questionnaires were collected, of which 15 were rejected because they were considered invalid, either because they were not fully completed or because they contained irrational and contradictory answers. Therefore, the results that will be presented below were based on their responses 100 balances of valid questionnaires.

4.3. Questionnaire

To explore the views and intentions of tourists regarding environmental policies of the hotels and the existence of alternatives activities in their destination of residence, a primary research was conducted with in the form of a printed questionnaire. Specifically the survey was conducted from the 15th September to 30th September 2019 in holiday hotels where they mainly stayed foreign tourists. We have chosen to explore the preferences of foreigners of tourists as it is known over time Greek tourism is based mainly on arrivals of foreign tourists who make the most overnight stays.

The questionnaire, which is attached to Appendices, was written in English and German and distributed by selected individuals of hotel staff in print to clients upon request to return it completed. These selected individuals were informed suitably to provide clarifying information on use but also the content of the questionnaire.

The questionnaire contains a total of 16 questions, of which the first five relate to demographic characteristics in order to investigate age, sex, the nationality and the annual income of the survey sample. The next two questions are about the frequency with which they visit Greece, which means if it was the first time they had visited it and if not, how many times they had visit it in the past. The next set of questions is about individual issues of environmental behavior and environmental management in the area of hotels to investigate if customer behavior is affected from the environmental practices applied by hotels though participation in these practices. To

this end, the questions were first raised though how environmentally sensitive they are in their daily behavior, though they know the international environmental management systems for hotels and whether the Certification from some hotels would be a criterion for choosing their stay. Also in case of non-certification were asked whether they seek information on any environmental practices that may occur to apply some hotels and if that affects their final choice. The next set of questions is the main body of the questionnaire and it concerns exploring tourists' preferences for environmental characteristics of hotels. Specifically, it is investigated if while staying in a hotel that applies specific environmental management practices their behavior is influenced in this direction, and more specifically, is also affected if they engage in practices such as recycling, water saving, or saving energy and reusing towels etc.

The last part of the research investigates the existence of some alternative activities such as hiking, sightseeing of wetlands, bird watching, thermal springs, mountaineering and bike rides can be a positive factor in the final selection of tourist accommodation. That is, beyond traditional incentives which as famously offers our place for holidays such as sun and sea as well and the hospitality services that hotels offer, i.e. accommodation, restaurants and entertainment services are investigating whether there are alternatives activities and the natural beauty of an area can attract tourism. It is also investigating whether tourists are willing to pay higher price in order to choose a hotel located in a destination which has any of the above mentioned activities.

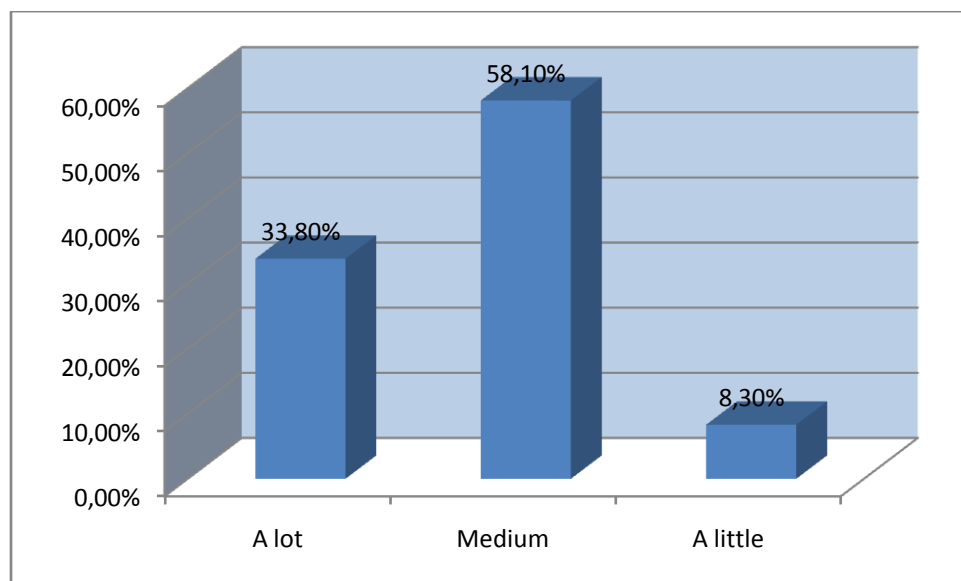
The completed questionnaires were examined for completeness and validity of the responses. Questionnaires that were not complete supplemented, whether their answers were unreasonable, were rejected. The data from the remaining questionnaires were entered in appropriate tables to carry out statistical analysis that will lead to useful extraction of conclusions.

CHAPTER 5

ANALYSIS OF THE RESULTS

The analysis of the answers revealed that only a small percentage of the participants state that they are not particularly sensitive to the environment issues, while the majority of respondents answered affirmatively this question. In detail, as shown in Chart 1 below, at question how sensitive they are to environmental issues in most of them (58.1%) answered their daily lives moderately, one in every three responded that they are very sensitive (33.6%), with only a small percentage (8.3%) to answer a little. So we see that cumulatively the percentage of those who answered it is environmentally sensitive in their daily lives (either very - or moderately), touching 91.7% which reinforces the view that more and more people in our time are interested and aware of the issues of the environment.

Chart 1- How sensitive you are to your daily life about environmental issues?



As far as knowledge of environmental management systems is concerned, it turned out that most, i.e. 56.68% did not have any information about international hotel environmental certification systems. Of course we notice that the percentages are almost divided, that is, there is a large

percentage of tourists 43.32% know about the environment hotel certification. This result is significant and agrees with international bibliography, which records a significant increase in the percentage of tourists who are aware and consider environmental behavior of hotels.

Interesting are the answers to the next question where the previous ones had responded affirmatively that they knew of an environmental system of certification, most of them (60.83%) said that takes this factor into account when choosing a hotel and vice versa 37.5% said they were unaffected.

Chart 2a- Do you know international systems of environmental certification for hotels?

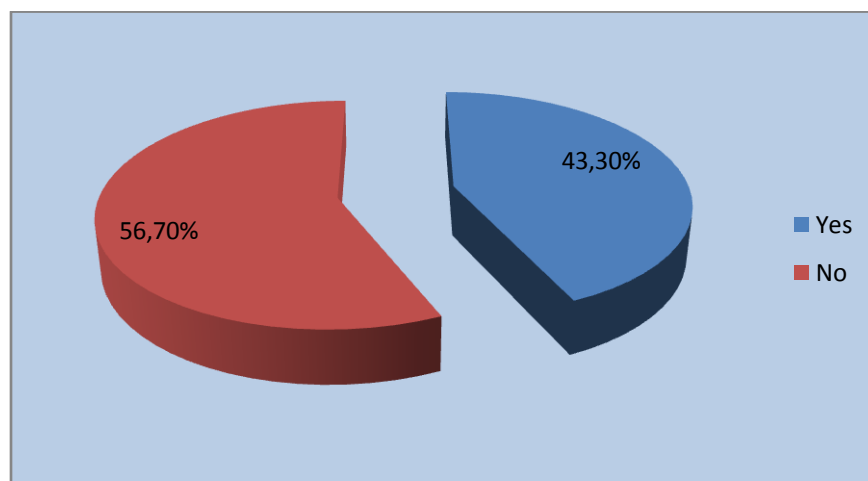
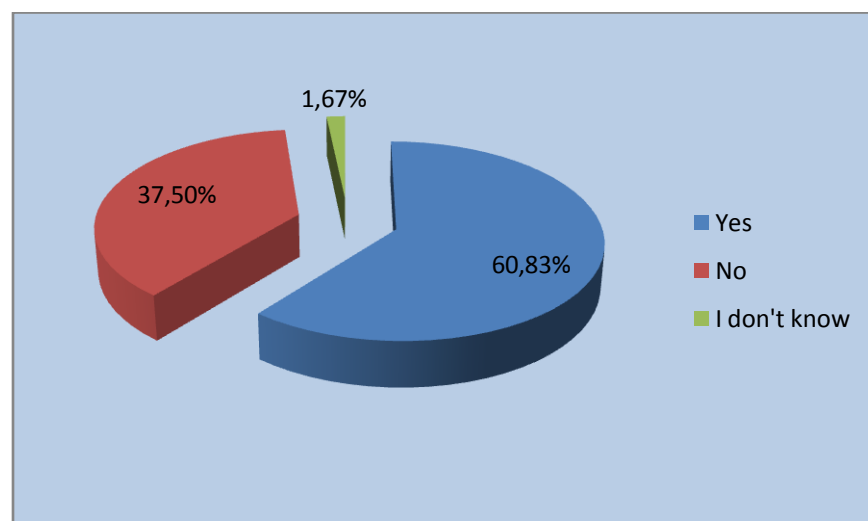


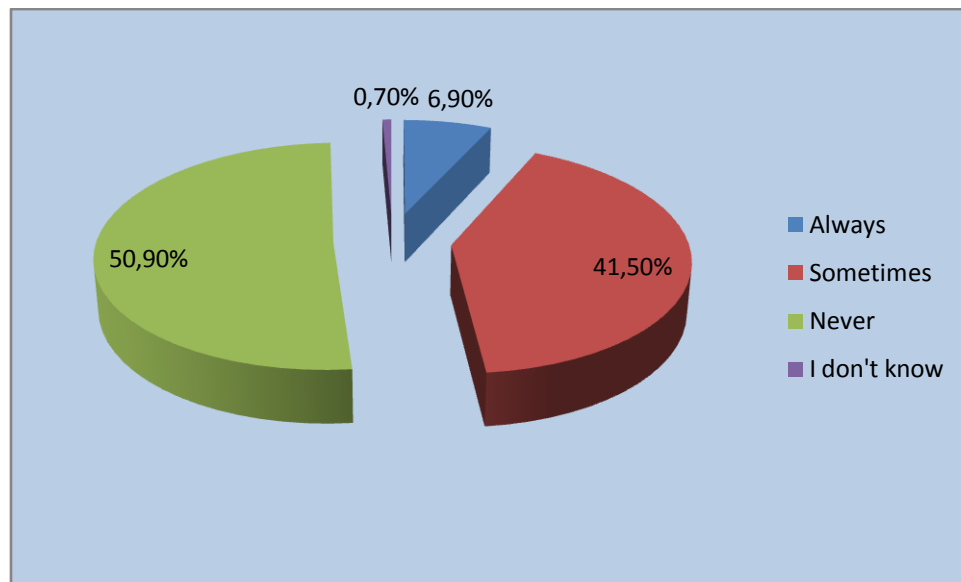
Chart 2b- If so, certification plays a role in your hotel choice?



If we do not take into account the answers to the previous question (Question 8: Do you know international hotel environmental certification systems?) and analyze the results of the last question (Question 9: Certification plays a role in choosing your hotel?) over the entire sample, we see that the positive answers correspond to 26.35% of the total sample. These results confirm that individuals are interested in and familiar with international environmental certification systems they are much more likely to consider this feature when they decide on their stay. As people's awareness increases and the credibility of environmental certifications will increase as well the percentage of tourists who will use certification as the selection criterion for his stay. Therefore, this figure is already considered significant and expected to increase significantly.

Continuing to explore the intentions of tourists regarding the environmental behavior of the hotels, they were asked if none of the hotels of their choice have a certified environmental management system if they are looking for policy information of environmental protection that they may apply. The answers in this question were relatively divided with 50.9% stating that they never looked for such information. Of the others who stated that they investigate the existence of environmental policies in their hotels interestingly, most do it only occasionally (41.5%) and a lot a small percent of 6.9% said they are always looking for information. That probably means that even sensitized citizens prefer to be assured of one and are not prepared to become actively involved, especially as they are on vacation. We believe that this result reinforces the importance of certification of environmental systems from hotels.

Chart 3- If none of the hotels of your choice are environmental certification, are you looking for information on environmental policies that do they apply?



Although the largest percentage of those who responded positively to the previous question said a relaxed disposition to investigate the environmental policies, the majority of them (61.2%) argued that existence of environmental policies influence their final decision for the choice of accommodation. On the contrary, 25.4%, although looking for information on the hotel's environmental policies, however, stated the existence of such policies do not affect their choice. If we reduce the results to this question throughout our sample and not just those who answered yes, in the previous question, we find it to be quite important reaches 29.6% of those who stated that environmentalism exists business policy is a factor in the final choice of hotel. These results reinforce our conclusion that the environmental behavior of hotels, certified or not, affects the decisions by a significant percentage of tourists. Heesup et. al., (2009) claim that the percentage of consumers who seek and ultimately choose "Green" hotels are constantly growing. Hotels are considered 'green' those that show environmental sensitivity and an eco-friendliness orienting their practices for greater environmental protection and it is obvious that themselves claim that a significant part of consumers seems to trust them. The results we have obtained from our research come to confirm the above arguments.

The above questions investigate whether their environmental policy hotels influence the choice of accommodation for tourists. But it is also important to consider whether environmental policy also affects the behavior of tourists during their stay.

Table 1- If the hotel you are staying at applies environmental practices your behavior during your stay in it is affected?

Yes	67.9%
No	31.4%
I don't know	0.7%

Analysis of the answers shows that if the hotel applies practices that protect the environment a large proportion of tourists, nearly 68% said that his own behavior towards this direction while staying in it. Therefore the existence of environmental policy and the implementation of specific environmental actions can have significant positive effects for a hotel, as it positively affects the residents to participate in the practices these and can thus also go beyond positive environmental impacts and significant impact on the reduction of operating costs by their involvement in environmental actions as we have seen above.

More specifically, a very large percentage that exceeds 90% said that participates in recycling practices, 73.6% in water saving practices and about 80% are involved in energy saving practices and reuse of towels, linens etc. On the contrary, the negative answers, i.e. those who did not participate in environmental practices ranged close to 20% for all of the individual practices except this recycling that are negative replies reduced to 7.6%.

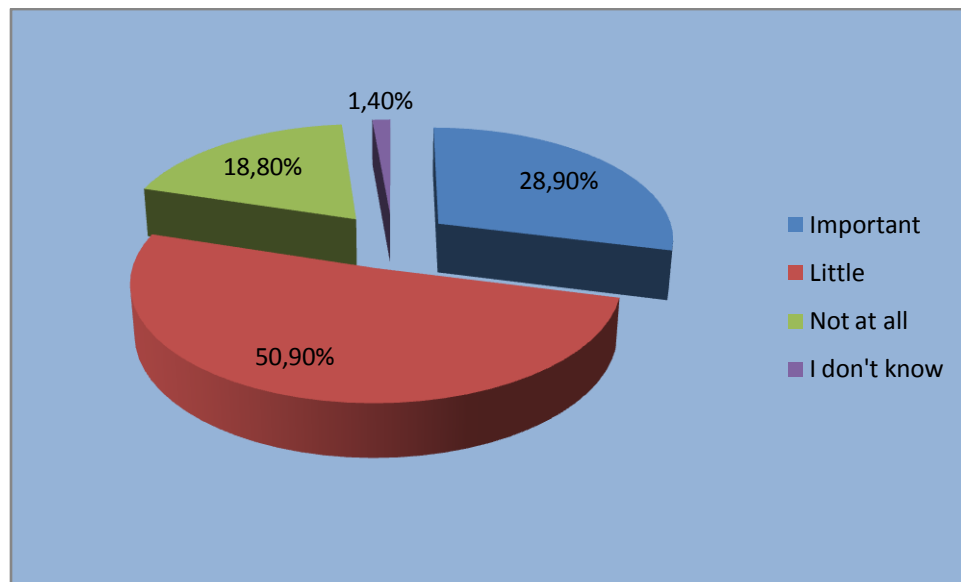
Table 2- Specifically do you engage in practices such as: Recycling, Water saving, Energy saving, reuse of towels?

Yes	
Recycling	92%
Saving water	75%
Saving of energy	81%
Reuse of towels	79%
No	
Recycling	8%
Saving water	25%
Saving of energy	19%
Reuse of towels	21%

It is obvious that the vast majority of tourists see it positively its participation in actions that reduce the environmental burden and are willing to actively participate in them when given the opportunity. In addition to the resulting environmental benefits especially in the local community, the benefits that should be taken into account result for the hotel both from the reduction of operating costs (electricity, water, frequency of washing, etc.) and by improving reputation.

Participants were then asked to state their views on how much the existence of alternative activities attracts their interest and plays a role in choosing the destination for their vacation. The marginal majority of participants argued that the options were alternative activities would have little influence on their decision, while almost one in five replied that this would have no effect on their choice. It is worth emphasizing but that quite a large percentage of 28.9% responded that the existence of activities is an important factor in choosing a destination, a percentage that is considered as valuable for our research. The results in this question shown in Chart 4.

Chart 4 - When you choose a destination, there are alternative activities such as hiking, cycling, climbing etc offered by a hotel, does it play a role?



The alternative activities suggested were the most important 34.7% of the thermal baths as well as walking and cycling routes with about 30%. On the contrary wetland activities, bird watching and mountaineering in particular seemed to have little influence on their choice for vacationers.

In more detail in the above question the results for the walkers the paths were almost evenly distributed, with the answers being shared on 'Important' (31.4%), 'Small' (32.1%) and 'None' (31.4%) options, while similar are the rates for the activity of Bike Trails ("Important" 29.6%, "Small" 33.6%, "None" 31.8%). So we see that the results from our sample are shared for these choices, however it is worth noting that in both cases almost one of the three considers these activities important for hotel selection. In the next two alternative activities, wetland and monitoring bird, we see that the results we got are about the same. That is, almost half replied that they would not choose a hotel based on these activities (47.7% and 46.6% respectively), approximately one in three responded that they were slightly affected by these activities (29.2% and 30.7% respectively), while only a small percentage seems to consider it an important factor in the existence of these selection activities (14.4% and 14.8% respectively). They are similar results we got for the activity mountaineering where only a small percentage (15.5%) considers it an important factor and a small percentage also (19.9%) find it of little importance for hotel choice. Most half of respondents (57%) responded that mountaineering had no impact at all the

choice of hotel. Finally the existence of Thermal Baths shows that it has higher value for respondents as 34.7% of them chose the answer "Important" and only 23.8% responded that they did not consider it significant factor.

The analysis of the above elements seems to be the most important factor is considered to be the source of healing, that is, people seem to like it to the beneficial properties and relaxation they offer and feel they have is an important motivation for choosing a hotel. Also interesting has the relative uniformity of results for the walking and walking options cycling trails, where these two activities are likely to be similar between them and are also an important criterion for the choice of accommodation. Looking to determine if these data relate to each other and to with the help of corresponding types in spreadsheets, we calculated the coefficient linear correlation (r) and we found that $r = 0.7$ so there is a strong correlation among the walking and cycling options (space - $0,3 < r < 0,3$ there is no linear correlation while if $r = \pm 1$ is perfectly linear correlation). As can be seen from the other activities proposed (wetlands, bird watching and mountaineering) they are not intense interest in respondents to motivate and choose a hotel for this purpose. Analyzing the above results should keep in mind that the questionnaires were answered by people who opted for a traditional holiday in locations and accommodations advertised and offered for this type of tourism. Our sample does not contain people who choose alternative type of tourism outside of summer or in areas that are advertised and offered for alternative activities. This bias in the sample may also explain the significantly higher positives preferences for mild alternative activities (such as cycling and hiking) paths) in relation to the most intense (such as mountaineering). Under this light and given the relatively high mean age of the sample we judge the percentages of positive samples in our sample are very important.

In an effort to investigate whether age plays an important role in tourist preferences we divided our sample into three age groups and we looked at the new results for the thermal baths which are the mildest form activity in relation to mountaineering which is the most extreme of the activities suggested in the questionnaire. The first group includes ages up to 30 years (14.4% of the sample), the second age group from 31 to 45 years (37.55%) while the last group includes everyone those aged 46 and over (48%). In the chart 5 we have per age group the answers given as important for both of the alternative activities. In the youngest age group about one in three responded that both the existence of healing baths and mountaineering are an important factor in

choosing a holiday destination (32.5% and 35% percentages respectively). For ages 46 and over, both percentages activities are smaller than the percentages of other solar groups, especially for climbing where this percentage is very low (6%) it is clear that at these ages there is little interest in this activity. Respectively and for the ages of 31-45 there is a greater interest in thermal baths the percentage here is quite high (46.1%) and a smaller percentage (20.1%) be significantly affected by mountaineering. Therefore the greatest interest for Thermal bath activity is provided by people aged 31-45 where almost half consider this activity important for site selection while mountaineering seems to be particularly important for younger people.

Based on the six different activities suggested above question, the research participants were then asked to answer if they were willing to pay more for a hotel that provides each of the activities separately from another hotel that did not give these alternative activities. The results we obtained show that the majority would not agree to pay more for any of these activities, although there are some activities with a significant proportion of those who said the opposite. More specifically, the largest percentage (43.7%) of them who answered in the affirmative the question was brought up by the choice "Therapeutically baths, while a relatively large proportion were those who answered "yes" to the baths "Walking" and "Cycling paths" (37.2% and 35% respectively). On the contrary, much lower are the percentages of those who would spend more money to enable them to enjoy the activities "Wetland", "Bird Watching" and "Mountaineering". In Table 3 the following is a breakdown of the percentages for the comparison of the specific question.

Table 3- You would choose a hotel that offers any of the following activities as opposed to another hotel that does not offer them, even though the former is more expensive than the second?

	Walking paths	Wetland	Monitoring birds	Therapeutically baths	Climbing	Cycling Paths
Yes	37.2%	15.2%	18.8%	43.7%	15.2%	35%
No	57.4%	77.3%	75.1%	53.4%	76.9%	59.2%
I don't know	5.4%	7.6%	6.1%	2.9%	7.9%	5.8%

From the above two questions we conclude that preferences are directly related with the willingness to pay. The percentage of those who stated willing to pay an extra charge slightly exceeds the percentage of those who said that alternative activities certainly influence their preferences. This conclusion is important as the literature consistently points to the existence of a gap between preferences and willingness to pay.

Also, combining the answers to the two questions above, it is clear that the activity seems to be of most use by the respondents and who would be willing to pay a higher price to enjoy it, is the existence of healing springs and baths. The highest preference for this option that offers health, wellness but also has therapeutic properties may be better interpreted if the medium is taken into account age of the sample which is quite high. Still important are also considered percentages for the activities that enable touring and hiking as well as cycling for a while though smaller percentages of other activities are not considered at all grateful. Summarizing the analysis of this question seems to be although there are differences between its individual activities of the population, however, is considered to be significant for either of them not even a negligible portion of tourists who would be willing to pay extra money to get the value that it seeks and can offer these activities.

CHAPTER 6

CONCLUSIONS - RECOMMENDATIONS

6.1. Conclusions

The above shows that climate change has an impact on tourism as it changes the conditions prevailing at the destination and modifies the various activities taking place there. Climate change is evolving slowly but its effects are increasing obviously. Continuous study of climate change is therefore essential to take the necessary measures in a timely manner so that tourism businesses does not result in unexpected financial loss situations.

It is an undisputed fact that today quite a large part of the population, especially in developed economies, appears to have particular sensitivity to ecology in his daily life. The environmental problems that plague our modern society and unfortunately continue with great intensity to destroy nature and our planet, seems to have lead a very large portion of the population to reconsider the way they are acting in their daily life and looking for a more eco-friendly behavior. This change in behavior is evident in the consumer as well their habits while the same is true in the hotel industry.

Our research shows that quite a significant percentage of people, knows or looks for information on environmental systems and practices implemented by hotels that voluntarily strive for the protection of the environment. Indeed, it seems that a respectable proportion of prospectiveof clients would be positively affected during the accommodation selection process if the hotel they are interested in has an environmental label of management or if it is implementing an environmental policy program. In fact, it is obvious from the results we obtained, a large percentage of customers said that while staying at a hotel their behavior is influenced by the existence of environmental policy. That is to say the environmental behavior that clients show so much in their daily lives, both during their selection process and during their stay in a hotel. The percentage of clients involved in the practices of the hotel's environmental protection is very large and in the four different practices we selected as a questionnaire that is, recycling, water saving, energy saving and towel reuse.

The extremely serious issue of environmental protection as we have seen is very concerned about modern society and as expected it has and businesses that are trying to take action to reduce their environmental footprint. The implementation of a program of environmental management can offer many benefits to a hotel. Definitely implementing a system helps a business to manage with more efficient way of consuming water and energy, but also with the rest practices it implements to achieve significant cost savings. After all, the results of our survey showed customer involvement it's really impressive. Full execution of the program by a company can lead it if it so wishes for its certification and consequently to positive publicity and response from society. When a hotel earns the eco label mark can by using appropriate techniques of marketing to capitalize on that achievement and make it bigger recognition by its customers. After all, as we saw in the positive opinion that customers are presented for eco-labeled hotels certification can positively influence their final decision and translate this into increased sales for businesses. It also seems that the existence of alternative activities is an important incentive for tourists to choose their place of residence.

6.2. Recommendations

Further researches could be made with tourism companies as to whether they are aware of climate change and its impact on tourism. It is a fact, that in Greece in particular a small part of the world is aware of the issues of the environment. A research could be carried out to determine whether there would be interest on the part of tourism companies in informing the environmental issues. It could also be requested by the tourists themselves at various tourist resorts, to express their views on the impact of climate change in their activities. It would be important to mention if they observe changes over time.

So it becomes clear that there has to be cooperation from both sides of tourism operators as well as tourists so that they do not suffer financially damage and still enjoy their vacation despite the change of climatic conditions.

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APPENDIX

Questionnaire

1.Age: _____

2.Male_____ Female ____

3.Nationality _____

4. Annual Income

1-20.000 euro _____ 20.0001-40.000 euro _____ More than 40.000 euro _____

5.Do you visit Greece for the first time?

Yes_____ No____

6. If it's now your first time, how many time have you totally visited Greece? _____

7. How sensitive are you on environmental issues during your everyday life?

Very ____ Medium _____ Little _____

8. Do you know any environmental certification systems that hotels use?

Yes _____ No _____

9. If you know, does the environmental certification play a role in your choice of hotel?

Yes_____ No _____

10. If among the hotels that you have chosen none of them has an environmental certification, do you seek information regarding any environmental policies applied by the hotels?

Yes _____ No _____

11. If yes, the environmental policy played a role for the choice that you made?

Yes _____ No _____

12. If the hotel that you stay follows environmental practices, does this have an impact on your behavior during your stay?

Yes_____ No_____

13. In particular do you participate in practices such as:

Recycling	Yes	No
Water conservation		
Energy conservation		
Reuse of towels, etc.		

14. If a hotel has alternative activities, such as cycling climbing etc. how much role plays to you?

Important _____ Small_____ None _____

15. In particular, which of the following has an impact on the choice you make?

	Important	Small	None
Hiking routs			
Wetland			
Cycling			
Natural spa			
Bird sanctuary			
Climbing			

16. If a hotels is more expensive that another would you select it because it offers:

	Yes	No
Hiking routs		
Wetland		
Cycling		
Natural spa		
Bird sanctuary		
Climbing		